CLAIMS

1. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, said method comprising:

logically dividing one or more networks within said first autonomous system into groups comprising one or more blocks of network layer protocol addresses;

dynamically determining an optimal incoming traffic link for each group based at least in part on any of: load of each link over a predetermined interval of time, congestion of each link over a predetermined interval of time, usage price of the link, capacity of each link or incoming traffic usage of each group over a predetermined interval of time, and

announcing reachability information for each group to said peer border routers in a manner biasing incoming traffic for each group towards said optimal incoming traffic link for each group.

2. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, said method further comprising:

determining incoming traffic usage for any of: said one or more blocks of network layer protocol addresses for each of said groups over a predetermined interval of time or for each of said groups as a whole over a predetermined interval, and

dynamically reconfiguring said groups by moving one or more of said blocks from a group to a different group based at least in part upon incoming traffic usage for any of: said one or more blocks of network layer protocol addresses for each of said groups over a predetermined interval of time or for each of said groups as a whole.

3. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, wherein said one or more border routers announce reachability information utilizing Border Gateway Protocol.

4. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 3, wherein incoming traffic is biased by pre-pending less AS numbers to a Border Gateway Protocol update message for announcements of each block of IP addresses across said optimal incoming link than for announcements of that block across non-optimal incoming traffic links.

5. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, wherein incoming traffic is biased by announcing aggregate network layer protocol addresses of said one or more networks across all links and, for each block of IP

addresses, specifically announcing said block across said optimal incoming traffic link for said block.

6. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, wherein congestion of any of said links is determined by actively sending packets to routers or hosts external to said first autonomous system via the link and monitoring responses to said packets to determine packet loss.

7. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, wherein congestion or load of any of said links is determined by querying said one or more border routers to determine utilization statistics.

8. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, wherein congestion or load of any of said links is determined by detecting retransmission rates over sessions passing through each link.

9. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous

systems, as per claim 1, wherein said optimal incoming traffic link for at least one of said groups is always the best quality link in terms of any from the group consisting of: congestion, load, capacity, usage price of the link and proximity.

10. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, wherein said optimal incoming traffic link is determined to provide an incoming traffic distribution with optimal load balancing across said links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems.

11. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, wherein said optimal incoming traffic link is determined to provide an incoming traffic distribution optimal response time.

12. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, wherein said optimal incoming traffic link is determined to provide an incoming traffic distribution with optimal usage cost.

13. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, wherein said optimal incoming traffic link is determined to provide an incoming traffic distribution with a weighted combination of optimal load balancing across said links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, optimal response time and optimal usage cost.

14. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, wherein said first autonomous system is an Internet Service Provider.

15. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, said method further comprising:

for a communication session between a destination host external to said first autonomous system and a source host internal to said first autonomous system, dynamically determining an outgoing traffic link for said session based upon any of: load of each link over a predetermined interval of time, congestion of each link over a predetermined interval of time, capacity of each link, usage price of the link or proximity of said destination host to said source host for each of said links, and

providing an indicator in a field of outgoing packets of said session to indicate to said one or more border routers to route said packets through said outgoing link.

16. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 15, wherein said proximity of said destination host to said source host for each of said links is determined by any of: polling a host on a similar subnet of said destination host or querying a database containing information on routes between autonomous systems.

17. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 11, wherein said field is an IP TOS header field.

18. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 11, wherein said field is an Ethernet 802.1q field.

19. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, said method further comprising:

for a communication session between a destination host external to said first autonomous system and a source host internal to said autonomous system, dynamically determining an outgoing traffic link for said session based upon any of: load of each link over a predetermined interval of time, congestion of each link over a predetermined interval of time, capacity of each link, usage price of the link or proximity of said destination host to said source host for each of said links, and

configuring said one or more border routers to route outgoing packets of said session from said source host through said outgoing link.

20. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 19, wherein said proximity of said destination host to said source host for each of said links is determined by any of: polling a host on a similar subnet of said destination host or querying a database containing information on routes between autonomous systems.

21. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, wherein said one or more border routers are configured to announce reachability information for each group to said peer border routers in a manner biasing incoming traffic for each group towards said optimal incoming traffic link for each group by a congestion control unit connected to said one or more border routers.

22. A method of dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 1, wherein a congestion control unit connected to said one or more border routers announces reachability information for each group to said peer border routers in a manner biasing incoming traffic for each group towards said optimal incoming traffic link for each group.

23. In a first autonomous system having multiple links to different autonomous systems via one or more border routers of said first autonomous system wherein said one or more border routers implement Border Gateway Protocol, a method of controlling traffic distribution across said multiple links comprising:

logically dividing one or more networks within said first autonomous system into two or more blocks of IP addresses;

determining incoming traffic usage of any of: each of said blocks of IP addresses over a predetermined interval or for a group of said blocks as a whole over a predetermined interval;

dynamically determining an optimal incoming traffic link for each of said blocks of IP addresses based upon any of: load of each of said multiple links over a predetermined interval, congestion of each of said multiple links over a predetermined interval, capacity of each of said multiple links, usage price of the link or incoming traffic usage of the corresponding block of IP addresses over a predetermined interval, and

for each block of IP addresses, announcing said block of IP addresses in a manner causing incoming traffic to be biased towards said optimal incoming traffic link.

24. In a first autonomous system having multiple links to different autonomous systems via one or more border routers of said first autonomous system wherein said one or more border routers implement Border Gateway Protocol, a method of controlling traffic distribution across said multiple links, as per claim 23, wherein said incoming traffic is biased by announcing said blocks of IP addresses across non-optimal incoming traffic links via a Border Gateway Protocol update message having two or more local AS numbers pre-pended thereto.

25. In a first autonomous system having multiple links to different autonomous systems via one or more border routers of said first autonomous system wherein said one or more border routers implement Border Gateway Protocol, a method of controlling traffic distribution across said multiple links, as per claim 23, wherein said incoming traffic is biased by announcing aggregate IP addresses of said one or more networks across all links and specifically announcing each of said blocks of IP addresses across said optimal incoming traffic link of each block.

26. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, said system comprising:

at least one congestion control unit connected to said one or more border routers;

said congestion control unit logically dividing one or more networks within said first autonomous system into two or more blocks of network layer protocol addresses;

said congestion control unit determining incoming traffic usage of any of: each of said blocks of IP addresses over a predetermined interval or for a group of said blocks as a whole over a predetermined interval;

said congestion control unit dynamically determining an optimal incoming traffic link for each of said blocks of network layer protocol based upon any of: load of each of said links over a predetermined interval, congestion of each of said links over a predetermined interval, capacity of each of said links, usage price of the link or incoming traffic usage of the corresponding block of network layer protocol addresses over a predetermined interval, and

said congestion control unit, for each block of network layer protocol addresses, causing said block of network layer protocol addresses to be announced in a manner biasing incoming traffic towards said optimal incoming traffic link of said block of network layer protocol addresses.

27. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein said network layer protocol addresses are IP addresses.

28. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous

systems, as per claim 26, wherein said one or more border routers communicate with said peer border routers utilizing Border Gateway Protocol.

29. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 28, wherein said incoming traffic is biased by announcing said blocks of network layer protocol addresses across non-optimal incoming traffic links via a Border Gateway Protocol update message having two or more local AS numbers pre-pended thereto.

30. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein said incoming traffic is biased by announcing aggregate IP addresses of said one or more networks across all links and specifically announcing each of said blocks of IP addresses across said optimal incoming traffic link of each block.

31. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein congestion of any of said links is determined by actively sending packets to routers or hosts external to said first autonomous system via the link and monitoring responses to said packets to determine packet loss.

32. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein congestion or load of any of said links is determined by querying said one or more border routers to determine utilization statistics.

33. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein congestion or load of any of said links is determined by detecting retransmission rates over sessions passing through each link.

34. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein said optimal incoming traffic link for at least one of said groups is always the best quality link in terms of any from the group consisting of: congestion, load, capacity, usage price of the link and proximity.

35. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein said optimal incoming traffic link is determined to provide an incoming traffic distribution with optimal load balancing across said links between one or more

border routers of a first autonomous system and peer border routers of different autonomous systems.

36. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein said optimal incoming traffic link is determined to provide an incoming traffic distribution with optimal response time.

37. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein said optimal incoming traffic link is determined to provide an incoming traffic distribution with optimal usage cost.

38. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein said optimal incoming traffic link is determined to provide an incoming traffic distribution with a weighted combination of optimal load balancing across said links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, optimal response time and optimal usage cost.

39. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein said first autonomous system is an Internet Service Provider.

40. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein:

for a communication session between a destination host external to said first autonomous system and a source host internal to said first autonomous system, said congestion control unit determining an outgoing traffic link for said session based upon any of: load of each link over a predetermined interval of time, congestion of each link over a predetermined interval of time, capacity of each link, usage price of the link or proximity of said destination host to said source host for each of said links, and

said congestion control unit providing an indicator in a field in outgoing packets of said session to indicate to said one or more border routers to route said packets through said outgoing link.

41. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 40, wherein said proximity of said destination host to said source host for

each of said links is determined by any of: polling a host on a similar subnet of said destination host or querying a database containing information on routes between autonomous systems.

42. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 40, wherein said field is an IP TOS header field.

43. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 40, wherein said field is an Ethernet 802.1q field.

44. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein:

for a communication session between a destination host external to said first autonomous system and a source host internal to said autonomous system, said congestion control unit dynamically determining an outgoing traffic link for said session based upon any of: load of each link over a predetermined interval of time, congestion of each link over a predetermined interval of time, capacity of each link, usage price of the link or proximity of said destination host to said source host for each of said links, and

said congestion control unit configuring said one or more border routers to route outgoing packets of said session from said source host through said outgoing link.

45. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 44, wherein said proximity of said destination host to said source host for each of said links is determined by any of: polling a host on a similar subnet of said destination host or querying a database containing information on routes between autonomous systems.

46. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein said congestion control unit configures said one or more border routers to announce reachability information for each group to said peer border routers in a manner biasing incoming traffic for each group towards said optimal incoming traffic link for each group by.

47. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein said congestion control unit announces reachability information for each group to said peer border routers in a manner biasing incoming traffic for each group towards said optimal incoming traffic link for each group.

48. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, wherein said congestion control unit is connected to said one or more border routers in an in-line sense.

49. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 48, wherein said congestion control unit determines incoming traffic usage of each of said blocks of IP addresses over a predetermined by aggregating a packet and byte count per IP block for each of said blocks of IP addresses over a predetermined interval.

50. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 48, wherein said congestion control unit determines incoming traffic usage for a group of said blocks as a whole over a predetermined interval, by aggregating a packet and byte count per group over a predetermined interval.

51. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems

systems, as per claim 26, wherein said congestion control unit is connected to said one or more border routers in an out-of-line sense.

52. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 51, wherein said congestion control unit queries said one or more border routers to retrieve statistics indicating incoming traffic usage.

53. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 52, wherein said one or more border routers copies traffic to said congestion control unit for calculating incoming traffic usage.

54. A system for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 26, said at least one congestion control unit comprises a plurality of congestion control units, each of said congestion control units connected to a corresponding border router to control outgoing traffic of a portion of said autonomous system to provide overall control of outgoing traffic.

55. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, said software code comprising:

a first plurality of binary values logically dividing a network within said first autonomous system into two or more blocks of network layer protocol addresses;

a second plurality of binary values dynamically determining an optimal incoming traffic link for each of said blocks of network layer protocol addresses based upon any of: load of each of said links over a predetermined interval, congestion of each of said links over a predetermined interval, capacity of each of said links, usage price of the link or incoming traffic usage of the corresponding block of network layer protocol addresses over a predetermined interval, and

a third plurality of binary values causing, for each block of network layer protocol addresses, said block of network layer protocol addresses to be announced in a manner biasing incoming traffic towards said optimal incoming traffic link of said block of network layer protocol addresses.

56. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, wherein said network layer protocol addresses are IP addresses.

57. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 56, wherein said one or more border routers communicate with said peer border routers utilizing Border Gateway Protocol.

58. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 57, wherein said incoming traffic is biased by announcing said blocks of network layer protocol addresses across non-optimal incoming traffic links via a Border Gateway Protocol update message having two or more local AS numbers pre-pended thereto.

59. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, wherein said incoming traffic is biased by announcing aggregate network layer protocol addresses of said one or more networks across all links and announcing each of said blocks of network layer protocol addresses across said optimal incoming traffic link of each block.

60. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, said software code further comprising:

a fourth plurality of binary values determining congestion of any of said links by actively sending packets to routers or hosts external to said first autonomous system via the link and monitoring responses to said packets to determine packet loss.

61. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, said software code further comprising:

a fourth plurality of binary values for determining congestion or load of any of said links by querying said one or more border routers to determine utilization statistics.

62. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, said software code further comprising:

a fourth plurality of binary values for determining congestion or load of any of said links by detecting retransmission rates over sessions passing through each link.

63. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, wherein said optimal incoming traffic link for at least one of said groups is always the best quality link in terms of any from the group consisting of: congestion, load, capacity, usage price of the link and proximity.

64. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, wherein said optimal incoming traffic link is determined to provide an incoming traffic distribution with optimal load balancing across said links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems.

65. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, wherein said optimal incoming traffic link is determined to provide an incoming traffic distribution with optimal response time.

66. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, wherein said optimal incoming traffic link is determined to provide an incoming traffic distribution with optimal usage cost.

67. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, wherein said optimal incoming traffic link is determined to provide an incoming traffic distribution with a weighted combination of optimal load balancing across said links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, optimal response time, and optimal usage cost.

68. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, wherein said first autonomous system is an Internet Service Provider.

69. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border

routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, said software code further comprising:

a fourth plurality of binary values determining, for a communication session between a destination host external to said first autonomous system and a source host internal to said autonomous system, an outgoing traffic link for said session based upon any of: load of each link over a predetermined interval of time, congestion of each link over a predetermined interval of time, capacity of each link, usage price of the link or proximity of said destination host to said source host for each of said links, and

a fifth plurality of binary values providing an indicator in a field in outgoing packets of said session to indicate to said one or more border routers to route said packets through said outgoing link.

70. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 57, wherein said proximity of said destination host to said source host for each of said links is determined by any of: polling a host on a similar subnet of said destination host or querying a database containing information on routes between autonomous systems.

71. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border

routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 69, wherein said field is an IP TOS header field.

72. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 69, wherein said field is an Ethernet 802.1q field.

73. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 55, said software code further comprising:

a fourth plurality of binary values determining, for a communication session between a destination host external to said first autonomous system and a source host internal to said autonomous system, an outgoing traffic link for said session based upon any of: load of each link over a predetermined interval of time, congestion of each link over a predetermined interval of time, capacity of each link, usage price of the link or proximity of said destination host to said source host for each of said links, and

a fifth plurality of binary values for configuring said one or more border routers to route outgoing packets of said session from said source host through said outgoing link.

74. An article of manufacture comprising storage media having software code embodied therein for dynamically controlling traffic distribution across links between one or more border routers of a first autonomous system and peer border routers of different autonomous systems, as per claim 73, wherein said proximity of said destination host to said source host for each of said links is determined by any of: polling a host on a similar subnet of said destination host or querying a database containing information on routes between autonomous systems.